



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/864,428 | 05/23/2001 | Peter Lin | D&F-015 | 2672 |

22888 7590 01/02/2004
BEVER HOFFMAN & HARMS, LLP
TRI-VALLEY OFFICE
1432 CONCANNON BLVD., BLDG. G
LIVERMORE, CA 94550

| |
|----------|
| EXAMINER |
|----------|

MASKULINSKI, MICHAEL C

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2113

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,428

Applicant(s)

LIN ET AL.

Examiner

Michael C Maskulinski

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-22 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 7, 9-11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 6, 8 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Non-Final Office Action

Claim Objections

1. Claim 2 is objected to because of the following informalities: in lines 4-5, the limitation *the combination thereof* does not have sufficient antecedent basis because a *combination thereof* has not been claimed. Appropriate correction is required.
2. Claim 7 is objected to because of the following informalities: in lines 2-5, the limitation *a group consisting of...failure of a fan disposed on said motherboard* is not connected with an *and* or an *or*. For purposes of examination the claim has been interpreted as *a group consisting of..., and a failure of a fan disposed on said motherboard*. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5, 9, 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Alexander, U.S. Patent 6,393,559 B1.

Referring to claim 1:

Art Unit: 2113

a. In column 2, lines 15-22, Alexander discloses that the boot initialization progress of the BIOS is recorded. The boot initialization progress provides an indication of the location in the BIOS initialization code of where the boot initialization failed (receiving at least one signal in response to said event and recording said at least one signal in a first recorder in sequence).

b. In column 4, lines 3-15, Alexander discloses that if the boot initialization code fails before video was initialized, the BIOS would provide beep codes to indicate where the boot initialization code failed. Beep codes, which are sounds emanated by the computer are provided when not enough of the hardware is initialized to provide an identification number or a written label of the failure (accessing said at least one signal in sequence and reporting said event by transmitting said sound signal according to sound data corresponding to said at least one signal pre-recorded in a second recorder).

Referring to claim 5, in column 3, lines 2-9, Alexander discloses that the self-healing BIOS can be placed in part and/or in whole in one or more of the memory modules. The self-healing BIOS includes intelligence that is built into the BIOS booting process to record steps involved in the booting process (wherein said first recorder is a first memory).

Referring to claim 9, a controller is inherent to the memory system of Alexander.

Referring to claim 10, in column 4, lines 3-15, Alexander discloses that the BIOS provides beep codes to indicate where the boot initialization code failed. Beep codes are sounds emanated by the computer (wherein said sound data corresponding to said

Art Unit: 2113

at least one signal and recorded in said second recorder are further accessed and transmitted to a speech circuit by said controller, thereby transmitting said sound signal to report said event).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander, U.S. Patent 6,393,559 B1.

Referring to claim 2, in column 4, lines 3-15, Alexander discloses providing beep codes to indicate where the boot initialization code failed (BIOS) and in column 4, lines 24-51, Alexander teaches identifying a card that caused the boot to fail (a hardware monitor). However, Alexander doesn't explicitly disclose transmitting a signal from a motherboard. The Examiner takes Official Notice that it is well known in the art of computer systems to have a motherboard indicate a failure upon start up of the BIOS. An example is the beep code provided by IBM BIOS to indicate a motherboard issue. It would have been obvious to one of ordinary skill at the time of the invention to include the motherboard indicator into the system of Alexander. A person of ordinary skill in the art would have been motivated to make the modification because failure of a

motherboard will result in the system being able to boot, therefore it is important to indicate the motherboard as failing in order to resolve the problem and successfully boot the system.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander, U.S. Patent 6,393,559 B1 as applied to claim 1 above, and further in view of Lin, U.S. Patent 5,835,885.

Referring to claim 7, in column 4, lines 3-15, Alexander discloses indicating failure of boot initialization code and the use of beep codes to indicate the failure. However, Alexander doesn't explicitly disclose sounding an alarm for other events and failures such as an overheated CPU. In column 2, lines 44-46, Lin discloses that an over temperature actuating circuit is actuated and outputs a signal (LO) to an over temperature alarm circuit for energizing it. In column 2, lines 46-50, Lin discloses that at this time since both the pre-located functional ON/OFF circuit and the over temperature alarm circuit are cascadelly grounded, an audio frequency alarm circuit is energized and outputs a sound alarm. It would have been obvious to one of ordinary skill at the time of the invention to include the temperature detection circuit of Lin into the system of Alexander. A person of ordinary skill in the art would have been motivated to make the modification because *as the temperature of a CPU becomes too high, not only the life of the computer will be affected, but the computer may even break down which is catastrophic in the fields such as national defense security, nuclear engineering or medical application etc.* (see Lin: column 1, lines 23-27).

Art Unit: 2113

8. Claims 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander, U.S. Patent 6,393,559 B1 as applied to claim 1 above, and further in view of Shin et al., US 2002/0062437 A1.

Referring to claim 11, in column 4, lines 3-15, Alexander discloses that the BIOS provides beep codes to indicate where the boot initialization code failed. Beep codes are sounds emanated by the computer. However, Alexander doesn't explicitly disclose that the sound data recorded in said second recorder are accessed by said controller with software, and said sound signal reporting said event is transmitted with an on-line program. In paragraph 0014, Shin et al. disclose a control method for controlling a computer, the control method comprising the steps of storing sound data depending upon a system state of a computer; detecting the system state when power is supplied to the computer; generating a sound command signal depending upon the system state; and outputting the sound data according to the sound command signal. It would have been obvious to one of ordinary skill at the time of the invention to include the control method of Shin et al. into the system of Alexander. A person of ordinary skill in the art would have been motivated to make the modification because it is desirable to provide a message indicating the state of the computer to help in diagnostics (see Shin et al.: paragraph 0010).

Referring to claim 13, in Figure 2, Shin et al. disclose that second recorder is a second memory.

Art Unit: 2113

Referring to claim 14, in paragraph 0036, Shin et al. disclose that sound data includes music, spoken words, and other audio data (said sound signal is changed to sounds of different sentences in different languages with an on-line program via a chip).

Allowable Subject Matter

9. Claims 3, 4, 6, 8, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 15-22 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or reasonably suggest a monitor system capable of transmitting a sound signal to report an event represented by said sound signal, comprising a first memory for recording said at least one signal and processing said at least a signal by a manner of FIFO (first in, first out).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | |
|--------------------------|---------------|
| U.S. Patent 5,388,251 | Makino et al. |
| U.S. Patent 6,192,490 B1 | Gross |
| U.S. Patent 6,384,848 B1 | Kojima et al. |
| U.S. Patent 6,657,548 B2 | Dai |

US 2002/0144191 A1 Lin

US 2003/0163765 A1 Eckard et al.

Computer Hardware Additional information on computer POST/Beep Codes


<http://www.computerhope.com/beep.htm>

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C Maskulinski whose telephone number is (703) 308-6674. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MM


ROBERT BEAUSOLIEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100